



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Adress: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,392	04/26/2006	Satoko Iwato	CL2310USPCT	9007
7590	11/04/2008	Dalickas, Gail A E.I. Dupont De Nemours and Company 4417 Lancaster Pike Wilmington, DE 19805	EXAMINER	
			HU, HENRY S	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			11/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,392	<b>Applicant(s)</b> IWATO ET AL.
	<b>Examiner</b> HENRY S. HU	<b>Art Unit</b> 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on Election of August 11, 2008.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-7 is/are rejected.

7) Claim(s) 1,2 and 8 is/are objected to.

8) Claim(s) 1-16 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/95/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is in response to Election filed on August 11, 2008. Applicant's election of Group I, Claims 1-7 is traversed with remarks on page 1. The traversal is on the ground(s) that it would not place an undue burden to search and examine the non-elected Group II (Claims 8-12) and Group III (Claims 13-16) with the elected Group I since they are so closely related in the field of fluorinated coating.

This is not found persuasive because Group I is directed to a coating system comprising a fluorinated terpolymer of VF<sub>2</sub>/TFE/HFP, Group II is directed to a coating system comprising a fluorinated dipolymer of VF<sub>2</sub>/HFP, while Group III is directed to a coating system comprising a fluorinated terpolymer of VF<sub>2</sub>/TFE/PMVE. The structural elements are mutually exclusive and the search terms are also mutually exclusive, thus they create an undue burden on the examiner. For one instance, each group is using different polymer. Although polymer may contain the same monomer unit, the individual property for each monomer component will not fully show up in the polymer.

**The requirement is still deemed proper and is therefore made FINAL.** As discussed earlier, Applicants' **IDS** (2 pages) filed on March 9, 2007 is received, while this US Application is from 371 PCT/US03/32090 filed on October 7, 2003. No pre-amendment or drawing is applied. Claims 1-16 with a total of three independent claims (Claim 1, Claim 8

and Claim 13) are now pending, **while non-elected Claims 8-12 (Group II) and Claims 13-16 (Group III) are withdrawn from consideration.** An action follows.

*Claim Objections*

2. **Claims 1, 2 and 8 are objected to** because of the following informalities:
  - (a) On **Claim 1** at line 5, the language as “VF<sub>2</sub> content is 47-60%” should be changed to “VF<sub>2</sub> content is 47-60 mole %”. See Claim 2 at line 2 for the same wording.
  - (b) On **Claim 2** at line 2, the language as “is greater than 50% to 60 mole %” is very improper since over 60 mole% may be included.
  - (c) On **Claim 8** at line 4, the language as “VF<sub>2</sub> content is 40-80%” should be changed to “VF<sub>2</sub> content is 40-80 mole %”. See Claim 2 at line 2 for the same wording.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. The limitation of parent **Claim 1** relates to a one-layer coating system for coating a substrate comprising a fluorinated terpolymer of VF<sub>2</sub>/TFE/HFP with the molar ratio of TFE to HFP is between 0.1 and 1.9 and the VF<sub>2</sub> content is 47-60 mole %.

*See other limitations of dependent Claims 2-7.*

5. **Claims 1-7 are rejected** under 35 U.S.C. 102(b) as being anticipated by Chen et al. (US 5,599,631) or under 35 U.S.C. 102(e) as being anticipated by Feiring et al. (US 2004/0037967 A1), Hochgesang et al. (US 2004/0048983 A1) or Pickering et al. (US 7,056,578 B2), all are with the evidence of Larson et al. (US H 1483).

Regarding “a one-layered coating by using a fluorinated terpolymer of VF<sub>2</sub>/TFE/HFP” of parent **Claim 1**, each of four references including **Chen, Feiring, Hochgesang and Pickering** has individually disclosed such a subject matter so as to make some products with fluorinated coating on substrate, wherein the fluorinated coating comprises the claimed terpolymer of VF<sub>2</sub>/TFE/HFP.

6. To be specific, see **Chen** at abstract, lines 1-10; column 2, line 55-61; column 4, line 44-50 for making a fuser member having at its outermost one-layer coating comprising a continuous phase of terpolymer VF<sub>2</sub>/TFE/HFP (which is known as commercial product **Viton B**) on polymeric substrate.

See **Feiring** at abstract, lines 1-8; paragraphs 0001 and 0030 for making a one-layer low-reflective coating system consisting of terpolymer VF<sub>2</sub>/TFE/HFP on plastic substrate. The monomeric ratios are disclosed in Table 4 at paragraph 0077.

See **Hochgesang** at abstract, lines 1-8; paragraphs 0023 and 0129 for making a one-layer coating system by using a liquid fluoroelastomer composition comprising a terpolymer VF<sub>2</sub>/TFE/HFP on some substrates. The monomeric ratios are disclosed at paragraph 0023 at lines 8-14.

See **Pickering** at abstract, lines 1-3; column 21, line 26 – column 22, line 24; particularly see column 21, line 35-37 for making a fuser member having at its outermost one-

layer coating comprising a continuous phase of fluoroelastomeric terpolymer VF<sub>2</sub>/TFE/HFP (which is known as commercial product **Viton B**) on some polymeric substrates.

7. It is noted that the commercially available **Viton B** has a monomeric molar ratio of VF<sub>2</sub>/TFE/HFP at 61/22/17 according to the disclosure of US H1483 to Larson et al. (see column 22, line 30-34). As known in the art, polymer by itself is a mixture of individual polymers, while the actual monomeric content in the final polymer may be somewhat different from the starting monomeric ratio. It is also noted that open language “**comprising**” is applied to the coating composition of parent Claim 1. Based on this rationale, each of Chen, Feiring, Hochgesang and Pickering anticipates current limitation of parent Claim 1.

8. Regarding **Claim 2**, the same rationale for the rejection of parent Claim 1 can be applied here for **VDF content**.

Regarding **Claims 3-5**, polymeric substrate is used. For instance, see Chen at column 4, line 44-50; see Feiring at paragraph 0042. PMMA polymer can be one of the options.

Regarding **Claims 6 and 7**, the references’ thickness of the coating is at least partially overlapping with the claimed range. For instance, see Chen at column 4, line 63-67; particularly see line 67 for **10-250 micron** thickness; see Feiring at paragraph 0044; particularly see line 2 for **thicker than 10 nm**.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. The following references relate to a one-layer coating system (for coating substrate) comprising a fluorinated terpolymer of VF<sub>2</sub>/TFE/HFP with the molar ratio as specified:

US 5,639,838 to Albano et al. only discloses the making of some coatings by using a terpolymer of VDF/TFE/PVE. See abstract, line 1-4. The claimed fluorinated terpolymer of VF<sub>2</sub>/TFE/HFP" of parent Claim 1 is not disclosed or suggested. Therefore, Albano fails to teach or fairly suggest the coating system of present invention.

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300 for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D. Mulcahy/  
Primary Examiner, Art Unit 1796

/Henry S. Hu/  
Examiner, Art Unit 1796

October 30, 2008